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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/076,976	02/15/2002	Xiangxin Bi	2950.18US02	1411

7590 01/11/2005

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EXAMINER	
LE, HOA T	

ART UNIT	PAPER NUMBER
1773	

DATE MAILED: 01/11/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/076,976	BI ET AL	
	Examiner	Art Unit	
	H. T. Le	1773	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *October 24, 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *18-30* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *18-30* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

13)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

a) ☐ The translation of the foreign language provisional application has been received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 112

2. Claims 18-30 are rejected under 35 U.S.C. 112, first paragraph for reasons set forth in the last office action and further discussed below.

Applicants obviously have misunderstood the rejection. The rejection is not whether there's support for the term "weakly agglomerated", the rejection is that recitation of "weakly agglomerated", in the absence of citing the forces that cause the agglomerates, is not commensurate with the scope of the original disclosure; that is, the claim should include the forces, namely Van der Waals and electromagnetic that are disclosed in the instant specification, that cause the particles to become "loosely agglomerated" because besides these forces there are other forces not named in the instant specification that could cause particles to "weakly" agglomerate.* In other words, the claims are broader than the enabling scope of the specification.

Applicants questioned whether the rejection was a written description rejection. The rejection clearly states that "[t]he specification does not enable any person skilled in the art to make and/or use the invention commensurate in scope with these claims (emphases added). Thus, it's clearly a scope of enablement rejection, not written description requirement rejection.

To obviate this rejection, the phrase "by Van der Walls or electromagnetic forces" must be added after "agglomerated".

Claim Rejections - 35 USC § 102

3. Claims 22 and 29 are rejected under 35 U.S.C. 102(b) as being anticipated by Wiederhoft et al for reasons set forth in the last office action and further discussed below.

Applicants argued that titanium dioxide particles produced by the method disclosed in the Wiederhoft reference are "aqueous sols and aglomerated masses" citing some European reference as a proof. This is not persuasive. Wiederhoft et al describe their titanium dioxide particles as "monodisperse" and "nanodisperse" particles. This suggests that the particles are not in the form of aqueous sols but rather meet the claimed language of "collection of particles". In addition, applicants argue that the claimed titanium dioxide particles are "un-agglomerated forms" of titanium dioxide while the Wiederhoft patent fails to disclose un-agglomerated titanium dioxide particles. The claimed language "a collection of particles" does not suggest or require that the particles be "unagglomerated" as contended by applicants. In addition, no where in the Wiederhoft patent suggests that their particles are of agglomerated forms. And for the particles of the Wiederhoft to be in agglomerated form, processes that create "solid bridges" between the particles are required such as: sintering, fusion, chemical reaction or setting of a binder (see footnote * on previous page) None of these processes are involved in the sol-gel process taught by Wiederhoft, and thus the resulting particles cannot form "agglomerated masses" as contended by Applicants.

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*See section under the heading "AGGLOMERATES" in the attached "Physical Charactization Terminology Reference",

Applicants also argued that the process disclosed in the Wiederhoft reference is the same process disclosed in the EP 444,798 reference, the process of which requires grinding after drying to yield particles. And Applicants further challenged the examiner to "refute" such argument. The Examiner does not think a response is necessary because Applicants have mischaracterized the reference. EP 444,798 is cited in the Wiederhoft reference (along with other patents and publications) as prior art known in the processes of making titanium dioxide particles, and thus cannot be used as "evidence" that supports Applicants' argument as to the nature of Wiederhoft particles are the same as that of the particles produced according to the process disclosed in the EP 444,798. Instead of arguing, Examiner believes it is more productive to invite Applicants to carefully re-read the Wiederhoft reference and withdraw this moot point from Applicants' arguments.

Applicants argued that "the Wiederhoft patent does not disclose rutile titanium oxides [sic] particles with an average particle size less than 150 nm because the Wiederhoft patent generally only discloses aqueous sols, and the products that result from drying the sols are agglomerated masses". This is not true! As discussed above that for particles to become "agglomerated masses", solid bridges between particles need to exist, and the solid bridges can only form with sintering, fusing or by a chemical reaction, none of which is present in the process taught by Wiederhoft. Thus the resulting particles made by the Wiederhoft process cannot form "strongly agglomerated" particles as argued by Applicants.

Responses to Arguments

4. Applicants' arguments filed October 24, 2004 have been fully considered but are deemed unpersuasive for reasons set forth above.

Conclusion

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to H. T. Le whose telephone number is 571-272-1511. The examiner can normally be reached on 10:00 a.m. to 6:30 p.m., Mondays to Fridays.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

H. T. Le
Primary Examiner
Art Unit 1773